Price, 30 Cents.

A SERIES

OF

AMERICAN CLINICAL LECTURES

EDITED BY

E. C. SEGUIN, M. D.

VOLUME I. No. VI.

OTITIS.

With the Compliments of the Author.

BY

C. R. AGNEW, M. D.,

CLINICAL PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

NEW YORK

G. P. PUTNAM'S SONS

182 FIFTH AVENUE

1877

Recent Medical Publications.

The Series of American Clinical Lectures.

VOLUME III, FOR 1877.

No. I. Transfusion of Blood and its Practical Application. By Prof. THOS. G. MORTON.

No. II. Hydrocele. By Prof. D. HAYES AGNEW.

No. III. The Philosophy of Menstruation, Conception and Sterility. By Prof. MONTROSE A. PALLEN.

No. IV. Convergent Strabismus. By Prof. THOS. R. POOLEY.

Further contributions for this volume have been arranged for from Professors S. D. Gross, S. W. Gross, Wm. Goodell, Harrison Allen, and Doctors Wm. Thomson and J. C. Wilson of Philadelphia, Prof. Wm. H. Byford of Chicago, and Professors Fordyce Barker, E. R. Peaslee, E. O. Jamway and N. M. Schaffer of New York.

The Numbers of the Clinical Lectures, both of this new volume, and Volumes I and II, will hereafter be sold at the uniform price of 25 cents each. The price of the volumes has been made $3 00 each, and that of the yearly subscriptions also $3 00.

Transactions of the American Neurological Association.

VOLUME II, FOR 1877.

Containing essays by Doctors Jewell, Hammond, Miles, Webber, Emerson, Weir, Mitchell, Dupuy, Beard, Schmidt, Seguin and others. Illustrated. Octavo. Cloth extra, [in September] $3 00.

A few copies remain of Volume I for 1875. Illustrated with lithographs and wood-cuts. Octavo. Cloth extra, $5 00.

The Medical Register FOR NEW YORK, NEW JERSEY AND CONNECTICUT, for 1877-78. Edited by Dr. A. E. M. Purdy. 12mo, cloth $2 50.

Diagrams FOR THE STUDY OF CEREBRAL AND SPINAL LESIONS. Prepared by Dr. E. C. Seguin. Sheets containing 15 figures, printed on plate paper, per sheet 25 cents: printed on thin paper, per sheet 10 cents.

A SERIES

OF

AMERICAN CLINICAL LECTURES

EDITED BY

E. C. SEGUIN, M.D.

Volume I. No. VI.

OTITIS.

BY

C. R. AGNEW, M.D.,

CLINICAL PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

NEW YORK:
G. P. PUTNAM'S SONS,
FOURTH AVE. AND 23D ST.
1875.

Number 6. **June, 1875.**

OTITIS; OR INFLAMMATION OF THE EAR,

AND ITS RELATIONS TO WHAT IS COMMONLY CALLED "TAKING COLD."

BY

C. R. AGNEW, M.D.,

Clinical Professor of Diseases of the Eye and Ear in the College of Physicians and Surgeons, New York.

At our last meeting we were upon the subject of otitis media catarrhalis, catarrhal inflammation of the middle ear; to-day, I propose to follow the line started at that time, and in the simplest and most colloquial manner to point out how the general practitioner may, by obeying a few plain rules, treat the cases of acute disease of the external and middle ear that are certain to occur in his practice. I shall not speak as to aurists or experts, but address myself to you as medical students and general practitioners. I shall try to avoid such allusions as would be understood only by those who are familiar with aural medicine. My purpose is to help the general practitioner to prevent some of the evil results which now so frequently come from the tardy, timid, or ignorant management of such aural affections as spring from common catarrh and furunculosis, or arise as complications of sore-throat, measles, or scarlet fever.

We have before us now a man in middle life, a teacher, who lost his hearing by exposure to cold. He, no doubt, had, at first, an otitis media catarrhalis, catarrhal inflammation of the middle ear. We

need not repeat the history of the case. It will serve our present purpose to accept that diagnosis as the basis of our remarks. It is the so-called taking cold which gives us many of the cases of acute or recurring middle ear disease. If this is so, it becomes an urgent question how may this tendency to catch cold be lessened or prevented. There is an additional pertinency in the inquiry to-day coming from the fact that the thermometer is ten or twelve degrees below zero, and catarrhal affections of the throat, ears, and chest are very prevalent. When we catch cold, or get a more or less acute catarrh, it is generally traceable to a sudden or unexpected fall in the temperature of the air, or to exposure of a limited portion of the body to moisture, or to the cooling effect of air in motion, or to the depressing influences of overheated or impure air in a dormitory or public assembly room. As we often cannot have the best conditions of ventilation and heating, how may we prepare the body, not only to withstand the inevitable exposures, but to turn even a draught into a pleasurable source of health. Living, as we ordinarily do, without sufficient out-of-door active exercise, the surface of our body becomes morbidly sensitive and susceptible to all those influences which produce catarrh. Hence you shall find among people the greatest dread of a draught. The average man, in a public vehicle or assembly, would rather incur the risk of typhoid fever than endure a draught. And there always is one or more enemies of his race at every discovered inlet of fresh air in an assembly room, ready, even to break up a public meeting in an uproar if the influx of the needed air is not regulated by his individual sensibility. Air in motion is evidently regarded by too many as one of the most morbific influences that a man at rest can meet. Hence the great obstacle in the way of ventilating public vehicles and buildings. Very few persons have been so educated as to endure, when at rest, air in motion, much less to derive pleasure and health from it. Now, I know from personal experience, and many years of close observation and practice, that it is

quite easy to correct or cure this morbid and often fatal sensitiveness, this tendency to fall an easy victim to the causes of common catarrh. If I am right, and the simple rules which I shall give produce the results in your practice that they have in mine, we shall hasten the time when a sufficient number of persons will be found in every community able to endure draughts, to insist upon the admission of sunlight and fresh air wherever human beings are domiciled.

Now, how may you and I learn to endure draughts and lessen our tendency to catch cold? First, by diminishing the morbid sensibility of the surface of the body. This can be brought about by graduated exposure and friction of the skin in a daily air or sun bath, followed by such local sponge baths as you may be able to speedily react from. That this reaction may be quick and spontaneous the temperature of the water used must not at first be much lower than 80° Fahr. It is well also at first in the air bath, to expose the body for a very short time only, such as would be spent in walking briskly across an ordinary bed-chamber. After a little practice the length of the exposure may be increased to fifteen or twenty minutes and the temperature of the water used in washing accommodated to that of the outer air. The salutary effect of this exposure may be still farther increased by two or three deep, chest-filling inspirations, with closed mouth, and by a few such movements of the arms as would tend to invigorate the chest muscles and quicken somewhat the action of the heart. At least four times a week, while taking the air bath and *before* any water is applied, the entire surface of the body should be rubbed briskly with "hair mittens and strap" until there shall have been produced a sense of glow and warmth of the skin. If the subject be not too feeble, the rubbing should be done by himself rather than by another, as it is thus made more beneficial. At first these exercises should be very brief, especially if the heat-producing powers of the body are low. In the latter case they should not be attempted at

first, especially in the winter, except in a sunny room or in one artificially warmed. Under all circumstances it would be better to use a sunny room. It should always be kept in view that the object of the treatment is to gradually and systematically lessen the morbid sensibility of the body, by *daily* exposing the *entire* skin surface to air, light, friction, and cleansing, in an atmosphere as nearly as possible at the prevailing temperature. Of course, imprudence in exposing the untempered nervous system of the skin for too long a time to a low temperature would defeat the grand purpose of the training and bring the method into contempt. Invalids should not plunge into the full practice at once, but enter upon it deliberately and cautiously, as one ignorant of swimming would wade into the water. Observing the cautions given, I believe that almost any one may, in a few weeks, render himself not only less susceptible of taking cold, but also better in every way, the benefit coming from the extensive range of sympathetic relationships which exist between the skin and every other part of the body. I do not say that persons thus trained may, for instance, run to catch a ferry-boat and then, without overcoat or hat on, stand with impunity exposed to a north-easter. They will be as cautious in times of danger as need be, but a love of pure air in motion will so take the place of the former dread of the same, that insensibly they will find themselves armed against the many foes of health that infest the air of domiciles and lurk in atmospheric changes. This part of the preventive treatment of catarrhal affections of the ear would be very incomplete, if we did not touch upon three or four other hygienic points that have important relations in the causation of "taking cold." I refer to food, clothing, and exercise. I am thoroughly convinced that the re-action from even moderate doses of alcoholic stimulants increases the tendency to "catch cold," and that one who has taken an alcoholic drink under the delusion that by so doing he may keep the cold out, should instantly put on an additional overcoat to keep his

animal heat in. This conclusion is entirely irrespective of the question as to whether alcohol is food or not. If it be food, I believe it is, as a rule, very bad food, except in certain states of the body—and what those states are, even the most learned chemists and physiologists have not yet determined with anything approaching agreement.

Experience in Arctic, and other naval and land expeditions, involving severe wear and tear of the body and exposure to climatic effects, whether of heat or cold, go to show uniformly that those who use alcohol suffer most from disease. The testimony of the English Parliamentary reports is remarkably unanimous on this point, a testimony that is drawn from the widest colonial experience, as England has had her flag under every climate. And here let me say in passing, that the best restorative for one who has been chilled by exposure to cold is hot water with or without milk, or black tea. Let one who wishes then to do everything possible to lessen his tendency to catch cold, avoid al ohol—even in small doses. Every article of food that merely excites the nervous system without helping materially to make good tissue, belongs to the same category. Every article of food that induces dyspepsia should be avoided, such as greasy potato-hashes, "fries," and many of those sapid messes that garnish the tea or supper table. The stomach and digestive organs should be trained into vigorous action. A man who cannot teach his stomach to be a good and provident servant of his body, is to be pitied indeed. A man with an uneducated, sour, or flatulent stomach is in a bad way generally, and especially whenever, as in the experience of the memorable and susceptible Mr. Jarndyce, the wind is out of the east.

I think that every one should try to learn to eat coarse farinaceous food and milk. Such articles of food as crushed wheat, wheaten grits, oatmeal, beans, and peas, and milk should enter freely into the dietary. Many of these articles of food not only contain indispensable tissue-building ingredients, but by their me-

chanical contact with the digestive organs do for them a work something like that which friction of the skin with the "hair mittens" does for the surface of the body in hastening the desquamation of effete and sticky epithelium and the cleansing of follicles. I would recommend then a simple breakfast of thoroughly boiled coarse farinaceous food, with cream or milk, fruit, and eggs. A lunch of somewhat similar character, and a hearty dinner, free from condiments and spices, but generously made up, if possible, of several courses, including fish, meat, and vegetables. Spices should be used very sparingly, if at all, especially by the young, and rather reserved in diet, to wake up the powers of senile mucous membranes. There is a form of chronic and intractable inflammation of the fauces, that frequently leads to ear trouble, which seems to me to be aggravated, if not induced, by the use of spices and tobacco, and by taking even otherwise good food, at too high a temperature. We should learn to eat food more slowly, to masticate it better, and to take it at a temperature more nearly that of the body. We come now to speak a little on the subject of clothing. Woolen flannel graduated in thickness, according to the season, should be worn next to the skin, by day and by night, throughout the entire year, in every climate. This rule applies to all ages. The prevalent idea that children can be "toughened" by insufficient clothing, and a promiscuous dietary, is a destructive fallacy. Even otherwise intelligent persons draw reasons for the practice of keeping the legs and chests of their children bare, and going themselves without flannel, from the supposed good health of savages and paupers. The fact being, that in both of the classes so absurdly quoted, the mortality among children and adults, which is excessive, is largely due to exposure as well as unsuitable food. This underclothing should always be changed at night, and never worn for more than two consecutive days without being washed. Better have a wardrobe rich in abundance of underclothing, than in so much mere outside decorative dress. If the same under-

clothing be worn day and night, the skin will absorb impurities which had previously been excreted. Some may smile at this caution, as though nobody ever wore the same underclothing day and night. Make more careful inquiry about the habits of your patients and you will know better. If you are compelled to wear any of the same clothing on the following day, turn such pieces, whether under or outside garments, wrong side out, and hang them separately, that they may be thoroughly dried and aired. Clothing so treated will last longer, an economic fact that begins to be not below the consideration of even an "American citizen," and will be much freer from animal impurities. The neck-ties and bands should be so loose as not to obstruct the return circulation in the neck; and foot-covering should be thick, loose, and low-heeled. As one of the means of guarding against catching cold, the foot-covering should be so broad in the soles as to leave the interosseous spaces in the feet free to protect, without pressing upon the nerves and vessels that vivify the toes. Many a cold, especially among women, is "caught" through feet that have been compressed into a partially lifeless mass by a narrow-toed and high-heeled shoe. The sole of a shoe should be as broad as the foot, and the height of the heel should never be, even for a thick sole, more than five to six-eighths of an inch high, measured behind. High-heeled shoes not only injure the feet, but, by throwing the base line of the body in front of the arch of the foot, bring the arms, by gravity, too far forward, and, tilting the whole frame in the same direction embarrass the chest, preclude free inspiration, bring an unnatural strain to bear upon ligaments, muscles, and other important organs, and thus make out-of-door life irritating and speedily fatiguing. Thus women and others who should be merry pedestrians, and ready even to contend with stormy weather, ride about, the flabby occupants of padded carriages, the victims of neuralgia, and other endless disorders that tend to fatty degeneration, catarrh, pneumonia, and premature decay.

A few words more regarding exercise as a means of guarding against "colds." The best of all forms of exercise is walking. Any one possessed of legs can learn to walk, and yet you shall meet patients every day who tell you that they cannot walk. Walking for pleasure and bodily profit has, with too many, become a lost art. You may teach any one who is not the subject for an immediate surgical operation to walk. The proper method is to set tasks of walking. Prescribe a daily walk, so short at first as to be clearly within the limits of the physical powers of your patient. Say one city block or a thousand feet out and back, and order a specified number of feet to be added daily to the length of the excursion. In this way I have induced very many to develop their locomotive powers and to gradually grow strong enough to walk miles with the greatest possible benefit to health. To secure such results you must be specific in your directions, even to the point of writing them down—many will say that they cannot walk without an object. The mere pleasure of locomotion should be a sufficient object, and would be, no doubt, if the organs of locomotion had not been crippled by disease or bad covering. If natural history and drawing were more generally taught, there would be an insatiable fondness for out-of-door life. People would have their perceptive faculties so quickened that they would observe what they saw and find more real pleasure in searching for the objects of nature. Many a college graduate in our country knows little or nothing about nature, as its works are spread everywhere about, and gets little or no pleasure or instruction from out-of-door life. If this be so, how must it be with those who have had very few opportunities for culture. One soon gets tired of merely looking over the sea or landscape unless those objects have been so studied as to be filled with inducements to pleasurable thinking, and thus to gratify some of the higher cravings of our nature. To sit in aimless indolence on the piazza of a watering-place hotel, or drive in state on a frequented or dusty road, gazing at the inmates

of passing vehicles, is certainly not likely to produce a fixed and ruling determination to spend daily, some portion of time in active out-of-door exercise.

We have thus far tried to touch upon some of those hygienic matters which are related to one of the commonest causes of ear disease, namely, catarrh, either in its acute or chronic form. We have said very little about medicines. Our object has been to show how observance of the rules of hygiene would tend to lessen the tendency "to catch cold." We have tried to address ourselves to you as students and to be as simple and even colloquial as possible in enforcing what we believe to be correct hygienic principles.

We pass now from that which is preventive, to discuss some of the conditions of disease which demand promptness on the part of the practitioner in his efforts to cure external, or middle ear inflammation at the earliest moment. We will not go over the various diseases systematically, our purpose not being to make a treatise for aurists, but to interpret for the general practitioner some of the more urgent and significant symptoms of acute external or middle ear disease, and to show how the indications may be so obeyed as to lessen the number of instances in which acute disease, unrecognized and unchecked, ravages the organ of hearing. First, then, we would say that every medical man should be able to distinguish the drum-head or membrana tympani—not one in a hundred can. Five minutes, spent daily for a week, in looking into the external auditory canal of a healthy ear, through a conical speculum, would enable one with ordinary powers of observation to avoid many of the catastrophies in treating common ear diseases.

"Ear-ache," so generally maltreated, comes, commonly in the beginning from one of two forms of ear disease, either inflammation of the dermoid or periostial lining of the external auditory canal, or acute inflammation of the middle ear. In these affec-

tions one may safely meet the urgent symptoms without making a very precise diagnosis, and thus save many ears.

Pain and deafness often occur in the course of common boils in the external auditory canal. How may we then easily distinguish such a disease from something deeper? Every one of you should be able to tell, at sight, whether a given external auditory canal is changed in calibre or not. If changed, what is the nature of the change. After inspecting the canal, explore with a probe, guarded with a pledget of cotton, to ascertain whether there is a focus of local inflammation. Carry the end of the probe around the entire circumference of the canal, touching each segment of the same. The instant that the end of your probe shall have touched the inflammatory centre, or boil, your patient will give audible evidence that you have found the tender spot. Repeat this experiment once or twice, and then, with a sharp, curved bistoury or knife, like that in fig. 2, freely incise the inflammatory centre down to the bone. Do this early, before the boil has involved much of the surrounding tissue, and you will stop, in many instances, that evil communication which might otherwise cause a succession of boils. After the incision, foment with a stream of hot water, let into the external ear from a fountain syringe. Never apply poultices under these circumstances, as the uninterrupted application of heat and moisture tends to beget œdema, making more or less of the lining of the canal boggy, and favoring the production of new boils, or of an obstinate, diffused inflammation. If this early incision does not cure, apply leeches, and follow those with hot or warm fomentation. The best place at which to leech for affections of the external ear, and ordinarily for those of the middle ear, is in the hollow at the base of the tragus, half an inch in on the front wall of the external auditory canal. Apply the leeches with a glass tube, having previously passed a plug of cotton beyond and scratched the objective point in the skin to start a little blood. One or two leeches so applied will do more good than

when applied in front of the tragus, or over the mastoid, unless there be a mastoid cell inflammation that is beginning to outcrop behind the external ear. Even then it is well to divide the number of leeches to be applied, so that several may be put on over the mastoid, and one or two in the hollow inside of the tragus. Promptly incise every furuncle that occurs.

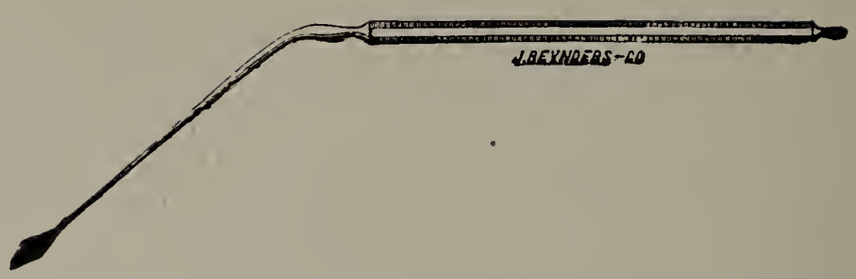
We pass now to speak of certain occurrences in middle ear inflammation requiring prompt attention. A man is taken with more or less deafness and pain in his ear, having been exposed to cold, had a nasal catarrh or sore throat, or been using a nasal douche. Perhaps he has had a night of pain or agony, and calls you early in the morning. What are you to do? Order a poultice over the painful organ, and an anodyne internally, and tell your patient that he must wait until "it bursts;" or, if the patient be a child, tell the attendant "that the poultices are to be repeated until there is a discharge?" If you do, I hope that you may get your discharge, and your place be filled with a more intelligent practitioner.

Cases maltreated in that manner form the bulk of the incurable cases of otorrhœa that fall into the hands of the scientific aurist, to worry him by their obstinate character, or to end in fatal temporal bone disease.

Called to such a case as we have alluded to, examine carefully the external auditory canal, to see that there be no inflammatory centre there, external to the drum-head.

Take a measure of the hearing distance with your watch. Apply leeches at once in the hollow, inside the tragus. Favor bleeding from the leech bites for an hour or two by hot fomentations. If marked relief of pain and deafness does not follow within a very few hours—say three or four—incise the drum-head with a fine straight bistoury, or a knife, such as we have in fig. 1.

FIG. 1.



It seems to me that any one who can perform the operation of introducing a catheter, or pass a key into a night-latch, can incise a drum-head. It is only necessary to introduce as large a conical speculum as possible into the diseased ear, and then to pass the cutting instrument along the floor of the meatus, until the lower portion of the drum-head is reached and perforated. If possible, carry the incision from just below the extremity of the long process of the malleus to the lower margin of the membrane. After the incision inflate the ear, if possible, by Politzer's inflator, or, if that is not at hand, by asking the patient to hold his nostrils closed firmly by means of his fingers, and then to blow strongly, with closed mouth, into the nostrils. We do not agree with Gruber as regards the impropriety of syringing after incising the membrana tympani, if his objection is aimed at such cases. On the contrary we like to syringe the external auditory canal with a warm aqueous solution of common salt, or carbonate of soda, say a drachm of either to a pint of water. By so doing you will often hasten the discharge through the incision in the membrana tympani of the inflammatory products in the middle ear. Sometimes these latter are serous, more or less viscid and stringy ; sometimes sero-sanguinolent or even purulent. After this incision give anodynes freely — *not before ;* they may, if given before, mask the processes going on in the ear, stupefying your patient until "something bursts," that "something" generally meaning, to the intelligent, a more or less helpless rent in the membrana tympani ; or, if that does not occur, a thorough invasion of the mastoid cells. Stand ready now to repeat the leeches, and the para-

centesis as often as may be necessary to throttle the inflammation. Do not be afraid of injuring the membrana tympani, even though you should repeat the paracentesis every day or every other day for a week or more. You cannot, by repeatedly incising the membrane, do it one tithe of the harm that may be done by leaving inflammatory products dammed up in the drum cavity until they macerate its machinery, threaten the portals of the internal ear, stuff the mastoid cells, or break through a more or less disorganized drum-head. *Be alert in these cases and strike your best blows at the inflammation within the first twenty-four hours.* Your weapons then are as follows, and to be usually used in the order named: leeches, warm fomentations, paracentesis, Politzer's inflator, anodynes. And, when you use the latter at the right time, use them boldly in doses to subdue pain.

Generally, persons suffering from "ear-ache" need not be kept in the house except for a few hours, unless in very bad weather. Moderate slow walking lessens the pain and seems, whether from the posture of the body or the influence of that form of locomotion upon the circulation in the head, to quicken the healthy process of resolution. If the pain is very severe, give the anodynes and encourage the sufferer to walk about slowly until a decided sleepiness has been induced.

The grand object in this stage of the disease is to maintain a free vent or outlet for the inflammatory exudations of the middle ear through an artificial opening in the drum-head. To be sure of this you must see your patient every five or six hours during the first two or three days and repeat the paracentesis of the drum-head whenever you have assured yourself that the opening previously made has closed. A good method to obtain this information is as follows. At each visit, gently syringe the external auditory canal with a little warm water holding some common salt or carbonate of soda in solution, say a drachm to the pint. Then inflate with Politzer's inflator; if you do not get a "perforation whistle," that

is, the sound made by the air passing up through the Eustachian tube, through the middle ear, and out of the perforation, repeat the paracentesis. If possible, pass your knife through the closed or clogged opening previously made, if not, then through the lower part of the drum, below the malleus. Occasionally, the inflammatory contents of the drum cavity will be too viscid or stringy to escape, even when Politzer's inflator is used. The more prolonged expiratory effort made by the patient's blowing his breath strongly into his closed nostrils sometimes accomplishes the object where it had failed by the Politzer method. Sometimes a viscid clot of exudation will stick in the wound in the drum-head and require to be dislodged by the use of a probe, guarded by cotton, or by a pair of bent forceps. You should repeat the leeches daily if the pain does not quickly subside. We have had no experience in such cases in the use of mercurials, and can see no indications for their use. Morphine, with or without bromide of potassium, may be given. Codeine and chloral may also be used to subdue the inflammatory action and relieve pain. The combination of a hypodermic of morphine with a large dose of bromide of potassium internally, seems to meet indications most happily. The best of all laxatives is some form of magnesian salt. The Bitter water given by itself, or with hot water, say a gill or two of the former to a pint of the latter is an admirable laxative. The diet should be nutritive, especially in the earlier part of the day, the occurrence of pain toward night making it inexpedient to fill the stomach at that time.

There is a marked tendency in these acute inflammations of the middle ear for the inflammatory action to become quite brisk in the lining of the external auditory just outside of the drum-head, and especially in the posterior wall of the canal. This seems to be explained by the proximity of the inflammatory focus in the drum cavity, and the contiguity to the back wall of the canal, of the mastoid cells. Acute inflammation of the drum cavity without inflamma-

tion, at least of the lining of one or more of the mastoid cells, is of rare occurrence. Of course, there can be no disputing the presence of mastoid cell inflammation when such gross features of it are present as tenderness of, or swelling over, the mastoid process. I do not refer to such cases now, but to those in which inflammatory symptoms occur which, at first, are referable to the drum cavity proper, but soon include that extension of the middle ear in the mastoid cells. When, in the course of a common cold, an ear begins to ring a little, and then, towards nightfall, to become deaf, then painful, and before twenty-four hours have elapsed to relieve itself by a more or less copious discharge, to be followed in a few days by healing and restoration of hearing, I do not suppose the mastoid cells are involved, except in the way of a little hyperæmia of their lining. But when the ear-ache is at all prolonged, and marked by soreness, tenderness, or pain spreading out on the side of the head in a fan-like manner, or darting through the corresponding orbit, or up into the vertex, there is marked mastoid cell disease. Such disease usually gets well—the inflammation resolving; but frequently it leaves tracks, over which it may easily come in recurring attacks, until, at last, a more or less grave osteitis is established. Now, we may lessen greatly this danger by prompt treatment of the very earliest stages of the drum cavity inflammation. I was speaking of the extension of the inflammation to the lining of the external auditory canal. The skin and the periosteum of the external auditory canal are closely incorporated, and when inflammation involves them the resultant swelling is very tender. The moment you see this tender swelling in the external auditory canal make a free incision from a point close to the drum-head outward, as far, if need be, as the ceruminous glands. And if one incision does not divide the inflammatory swelling freely, make one or more parallel with the first. After this, foment by warm douching. This early cutting will give great relief of pain, and perhaps prevent the formation of

a carious fistula through the bony wall of the canal into a neighboring mastoid cell. The best instrument with which to make such an incision, is that in fig. 2. The following cases may serve to illustrate what we have just said.

FIG. 11.

Case I.—D., æt. 48 ; while using a nasal douche, on the 13th of the month, washed a large dead fly out of his nares. Did not fee any water go up to either ear. Pain, however, started in his left ear soon after. On the 16th I first saw the case. H. D. R., normal ; L. E., 2″ ; tuning-fork heard best in L. E. ; pharynx red and shiny ; left external auditory canal somewhat reddened, and membrana tympani rather red ; Eustachian tube open. Diagnosis :—Inflammation of the middle ear and mastoid cells. Ordered leeches below tragus, warm douche, and paregoric.

17th. Pain relieved, objective symptoms the same.

18th. Pain returned in the night ; repeated leeches and gave hypodermic of morphine, previously incising the membrana tympani below the malleus. A free flow of sero-sanguinolent fluid followed the incision, and was greatly increased by the use of Politzer's inflator. Continued warm douche in external auditory canal.

21st. Politzer used twice a day ; warm douche, three or four times a day ; codeia at night. Leeches repeated on the 20th. On that day the sero-sanguinolent fluid changed to pus, and being more viscid became frequently dammed up in the drum cavity, and was made to flow by douching and politzerizing.

22d. Had a good day yesterday and a bad night. Has had from the first day or so, pain and soreness in head. Took codeia freely, but was kept awake last night by pain in depth of the ear and through corresponding temple ; could not lie on left side of head ; perforation is open ; pus comes freely on Valsalvian inflation, or use of Politzer. Repeated leeching.

29th. No discharge since yesterday; little or no pain; pain returned this morning and has been annoying all day; pain seems more external. Some inflammation of external auditory canal, with swelling, especially of the posterior wall, near drum-head. Ordered leeches again and anodynes.

30th. Was leeched at 9 15 P.M., and again at 11 15 P.M.; took three large doses of paregoric, but awake frequently during the night with pain. Periostitis of back wall of canal worse; made three parallel incisions through periosteum to the bone, one above, one behind, and the other below. Made also another paracentesis of drum-head and evacuated much sero-sanguinolent fluid, aiding the flow with the Politzer, and the Valsalvian method; gave 60 grs. of bromide of potassium in one dose, as there was much pain through the head.

31st. Slept very well through the night.

1st. "Feels more comfortable than at any time since the attack, especially behind the ear." No swelling of mastoid at any time.

2d. The perforation of membrana tympani healed during the night.

3d. Calibre of canal nearly normal; no pain or tenderness over ear or mastoid; no otorrhœa; no trace of wounds of membrana tympani.

6th. Ear perfectly comfortable. H. D. 16″.

Went on to full recovery.

Case II.—S., æt. 18. Has had deafness in left ear with offensive otorrhœa for ten years. Complains now of dizziness with diffused pain in left side of head and a tenderness which makes lying on that side disagreeable. H. D. L. E., nails at 3″. Tuning-fork, when on forehead, heard best in left ear. Has chronic inflammation of the fauces. External auditory canal filled with offensive pus, on removing which the membrana tympani is found to be red, swollen, and pulsating. There is a small perforation in upper

part of membrane, anterior to the malleus. No perforation whistle either from Valsalvian inflation, or use of Politzer's inflator. External auditory canal diminished in calibre throughout inner half and tender to touch.

Diagnosis : Otitis media sup. with mastoid and meningeal complication.

Ord. leech and warm water injection. Treatment interrupted by a malarial attack and a trip abroad.

Sept. 27th. Again examined the ear. No change. Otorrhœa offensive and continuous ; lining of external auditory canal swollen and tender. It being evident that the passage for the pus was indirect, a free incision was now made in lower part of membrana tympani, and by Valsalvian inflation viscid pus was slowly forced out through the opening. This gave a decided sense of relief to the ear.

Dec. 4th. Again saw the case. Still has more or less pain in head ; membrana tympani still reddened and thickened, no trace of the incision ; repeated the latter.

Dec. 9th. The last incision gave comfort in the ear so long as it remained opened ; is now closed ; yesterday had severe headache. To-day made free crucial incision in lower part of membrana tympani but could not get a perforation whistle. Middle ear and Eustachian tube seem to be obstructed by a thickened mucous membrane and viscid pus. Ord. internally potass. iodide ʒij., potass. brom. ʒiij., aq. ℥iv. *M.* Dose, a drachm three times a day. Ear syringed frequently with warm solution of carbonate of soda and a leech from time to time applied inside of tragus.

Dec. 11th. The water when thrown into the ear by syringe now is felt in the throat.

Jan. 4th, 1875. Cannot get any perforation whistle, repeated the paracentesis.

Jan. 5th. H. D. has now increased from ability to hear the click of the finger nails at three inches to watch at one inch and a half and pain in ear and head has subsided.

Jan. 25th. No pain in head since last date. Perforation now open, air whistles through on use of Politzer, but not when Valsalvian inflation is used. Argent. nitrat. gr. x. to aq. distil. ʒi., dropped into external auditory canal and forced through middle ear and Eustachian tube by introducing the nozzle of the Politzer's inflator into the external meatus. Still under treatment.

Case III.—J. C., æt. 37. Took a severe cold in head six weeks ago. Three weeks ago began to have some deafness in both ears, followed by a watery discharge from the right ear and severe pain. The latter did not occur until after the slight discharge alluded to, but immediately became very severe, and after lasting three days was accompanied by a thick, purulent otorrhœa. At the time of the occurrence of the ear symptoms was using a solution of salt and water in a nasal douche and observing every precaution, under medical advice, to avoid strangling and invasion of the middle ears. Had used the nasal douche for many years on the occurrence of nasal catarrh and does not remember to have forced water through Eustachian tubes at any time. H. D. R. E., laid, L. 4″, M. T. R. E. red and somewhat swollen ; deep pain, very severe at night. Did a free paracentesis and ord. leeching. Two days after, ear still painful, swelling of lining of the external auditory canal increased ; otorrhœa continues. Made a free incision through the swelling in the external auditory canal near the membrana tympani, and at the same time repeated the paracentesis.

These were followed by comfortable sleep and an increase of H. D. from watch laid to two inches. The deafness now slowly but steadily lessened in both ears, pain and otorrhœa and all signs of inflammation disappeared.

Case IV.—Mrs. J. N. C. Has had catarrh and been in the habit of using the nasal douche for more than two years. Had never had ear trouble until three or four weeks ago, when her throat became sore and then deafness in right ear with ear-ache followed. The ear-ache has existed "off and on" for the past three

or four weeks, and comfort has been promised on the occurrence of "a discharge." Last night the pain attacked the right mastoid region. Left ear normal. The right external auditory canal is uniformly diminished in calibre by a diffused and tender swelling. The right membrana tympani is red and swollen ; H. D., contact ; Eustachian tube is open on the use of Politzer's inflator. The mastoid region is somewhat tender on percussion and shows slight redness and swelling.

Made a free incision of the membrana tympani below and behind the malleus and evacuated a considerable quantity of bloody serum.

On the following day it was noted that the H. D. had increased to two inches, and that there had been no pain during the night. The tenderness in mastoid was also less. This case got well, under observation, in two or three weeks more ; the inflammation showed a tendency twice to recur, but it was easily subdued by two free leechings below the tragus. My purpose is not to give all the details of the progress of this case, but to show the marked effect produced by the free paracentesis. In this case there had been for several weeks an inflammation of the drum cavity, involving the mastoid cells. During most of this period it is fair to presume that the products of the inflammation being serous and not viscid had, in a measure, found their way down the Eustachian tube, to the nares. Slowly, however, the disease was involving more and more of the organ, and would soon have exhibited a profound mastoid cell inflammation, with brain complication. The turning-point in the case from which the cure began was the free paracentesis. Under similar circumstances, I would now not only tap the drumhead, but incise freely the inflamed lining of the external auditory canal.

Case V.—Feb. 10. G. P., æt. 23. Three days ago began to grow deaf in left ear in church. Tried to relieve the deafness by blowing his nose. Could not. Instilled oil of tar, and almost immediately had pain in the ear. This pain has continued ever since,

and yesterday began to outcrop behind the ear, in the mastoid region. Has had a very little bloody discharge from the ear. Assigned cause, cold. H. D. R. E., 2′ 6″, L. 1½″.

Right ear normal in appearance. Left auditory canal shows considerable dried crusts adhering to its walls. Lining grows inflamed and swollen in the vicinity of membrana tympani.

Membrana tympani rather red and swollen, especially behind the malleus. Corresponding mastoid region tender on percussion, but not swollen. Eustachian tube seems to be open on use of Politzer. No perforation whistle. Diagnosis, otitis media acuta. Incised the membrana tympani immediately, and carried a free incision along the posterior wall of the canal. Ordered also a leech below the tragus, and warm water douche.

Next morning, reported "that he had slept all night, and experienced a wonderful difference." No pain, no tenderness over mastoid. No pain on shaking or moving head as before. Has had a bloody discharge from ear all through the night. The swelling in the region of the membrana tympani much less. The Politzer forces out with a perforation whistle a free flow of mucilaginous, viscid, straw-colored fluid.

Feb. 12.—Since yesterday, has had a constant flow of light straw-colored fluid through opening in membrana tympani.

Feb. 13.—Discharge has stopped, followed by some pain. H. D. 2″. No perforation whistle. Examination shows that wound has closed. Again incised the membrana tympani, and ordered a leech below tragus.

Feb. 14.—No discharge or pain since yesterday. Membrana tympani healed. H. D 2″. Again perforated membrana tympani, and evacuated mucoid fluid, and got a perforation whistle. The case went on favorably until the 18th, four days, when the external auditory canal began to be invaded by a very painful swelling, of a diffused, furuncular character. Ordered quinine and cod-liver oil, and leeches.

Feb. 22.—Incised a small abscess in the floor of the canal.

March 8.—H. D. 2′ 6″. No evidence of disease except slight redness of the membrana tympani, and adjacent lining of the canal. After use of Politzer, H. D. increased to 3′ 6″. To continue cod-liver oil.

Under similar circumstances, I would now, in addition to the remedies employed on the 18th Feb., in the above case, make a free incision through the inflammatory swelling of the canal.

We cannot be too prompt in evacuating the middle ear in cases of inflammation of that part. By delay we can gain nothing, as the paracentesis never does any harm. And the beneficial effect of an early incision, made through an inflammatory swelling in the external auditory canal, often extends to the more remote seat or focus of the inflammation in the middle ear. I wish that I could impress upon you the importance of applying these principles in the treatment of the ear complications of measles and scarlet fever. You should invariably examine the ears *daily*, in all cases of measles or scarlet fever, and anticipate, if possible, that ulceration of the membr. tympan. which so frequently occurs in the progress of those maladies. A vast number of cases of obstinate or incurable otorrhœa and chronic middle-ear disease might be prevented if the general practitioner would scrutinize daily the ears in those cases in which ear complications are likely to occur. And of all the remedies employed in such cases paracentesis of the drum-head is the most valuable. No practitioner is really prepared to treat a case of measles or scarlet fever who is not able, at least to recognize the drum-head when he sees it. and to perform the simple operation of paracentesis. Again I remind you that my intention, in this colloquial lecture, is not to teach experts, but to help general practitioners to apply some of the principles of hygiene and surgery to the very large and common classes of catarrhal and other inflammatory affections of the organ of hearing.

Recent Medical Publications.

Ferrier (Prof. David, M. D. F. R. S.) The Functions of the Brain. Octavo. Cloth with numerous illustrations. $3 50.

Of this work the London '*Nature*' says :—

"Full of suggestions, and rich in facts which no-counter facts can set aside. It will long remain a storehouse to which all students must go for material."

"The chief object of the author, he informs us, was to present to the student of physiology or psychology a systematic exhibition of the bearing of his own experiments on the functions of the brain. In doing so it was necessary to cover the whole ground of nerve-function "—*Pac. Medical and Surgical Journal.*

Jacobi (Mary Putnam, M. D.) The Question of Rest for Women during Menstruation. Being the Boylston Prize Essay of Harvard University for 1876. With Fifty Sphygmographic Traces, showing variations in arterial tension, and tables giving results of 250 urea analyses of urine. Octavo. Cloth, $3 00.

"There can be no doubt that the author has performed a very grateful service to medical science, and to her own sex, in the production of this learned and instructive dissertation."—*Chicago Tribune.*

"It is good to see a book about women by a woman. Our author, a woman, with all her experience of women, proposes to state the facts as she has experienced them and seen them. She does it clearly and candidly, and the work is well worth reading, and should be an authority on the subject."—*N. Y. Eclectic Medical Journal.*

Seguin (E. C., M. D., Clinical Professor of Diseases of the Mind and Nervous System, in the College of Physicians and Surgeons, New York.) Myelitis of the Anterior Horns; or Spinal Paralysis of the Adult and the Child. Octavo. Cloth extra, $1 50.

"This essay by Dr. Seguin is another valuable contribution to this department of study, and can be commended, not only for its clearness of statement, and for the value of the facts presented, but for its success in rendering more easy the differential diagnosis of changes in the anterior cornua of the arc from other forms of spinal affections."—*New York Medical Review.*

Farquharson (Prof. Robert) A Guide to Therapeutics. Octavo. Cloth, $3 00.

Hill (Berkeley) **and Cooper** (Arthur). The Student's Manual of Venereal Diseases. Being a concise description of those affections and their treatment. 12mo. Cloth, $1 00

Robinson (Henry) **and Melliss** (John Charles). Purification of Water Carried Sewage. Data for the guidance of Corporations, Boards of Health and Sanitary authorities. Octavo. Cloth, $2 50.

G. P. PUTNAM'S SONS.

182 Fifth Avenue, New York.

THE SERIES

OF

AMERICAN CLINICAL LECTURES.

CONTENTS OF VOLUME II., FOR 1876.

Octavo, Cloth Extra, $3.00.

EXTRACTS FROM NOTICES OF THE PRESS.

This series will be read with much pleasure. . . . ."—*London Medical Record, May* 12, 1875.

"The series of CLINICAL LECTURES, edited by E. C. Seguin, M.D., are all that could be desired in that direction."—*Cincinnati Lancet and Observer, Sept.*, 1875.

"This brochure (No. IV.) constitutes one of the series of AMERICAN CLINICAL LECTURES now being published under the editorial management of Dr. Seguin. We have read it with very great satisfaction; and when we say that it is one of the best contributions which Dr. Mitchell has made to practical medicine, we award it, in our opinion, the highest praise."—*Phila. Medical Times, April* 14, 1875.

"We commend the undertaking with all our heart, and shall look forward to its further progress with a lively interest in its success."—*New Orleans Medical and Surgical Journal.*

"The series is heartily commended. Their special value is that they are practical in their teaching."—*Virginia Medical Monthly, April*, 1875.

"The lecture to which we have referred in this notice is of special interest and importance."—*Am. Journal of Medical Sciences, Oct.*, 1875.

"The first number already received, fully sustains the announcement."—*Detroit Review of Pharmacy and Medicine, March*, 1875.

"If Dr. Seguin's success in procuring lectures is as good in other departments of medicine as this of Dr. Mitchell's is in the one in which he labors, he will confer a benefit on the profession in issuing them."—*Chicago Journal of Nervous and Mental Disease, July*, 1875.